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A.D. 1872, 17th JANUARY. N<sup>o</sup> 147.

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SPECIFICATION

OF

CHARLES HENRY MACK.

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ARTIFICIAL TEETH.

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LONDON:

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1872.







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A.D. 1872, 17th JANUARY. N° 147.  
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### Artificial Teeth.

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*(This Invention did not proceed to the Great Seal.)*

**COMPLETE SPECIFICATION** filed by Charles Henry Mack at the Office of the Commissioners of Patents, with his Petition and Declaration, on the 17th January 1872, pursuant to the 9th Section of the Patent Law Amendment Act, 1852.

5    **TO ALL TO WHOM THESE PRESENTS SHALL COME, I, CHARLES HENRY MACK,** of Portland, Multnomah County, State of Oregon, United States of America, send greeting.

10    **WHEREAS** I am in possession of an Invention for "**AN IMPROVEMENT IN ARTIFICIAL TEETH,**" and have petitioned Her Majesty to grant unto me, my executors, administrators, and assigns, Her Royal Letters Patent for the same, and have made solemn Declaration that I am the first and true Inventor thereof.

15    **NOW KNOW YE,** that I, the said Charles Henry Mack, do hereby declare that the following Complete Specification under my hand and seal fully describes and ascertains the nature of the said Invention, and



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*Mack's Improvement in Artificial Teeth.*

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in what manner the same is to be performed in and by the following statement:—

The nature of my Invention consists in providing an artificial crown with an undercut or dovetailed mortise by means of which it is secured to the natural root, substantially as herein-after set forth. 5

To enable others skilled in the art to which my Invention relates to make and use the same I will now proceed to describe its construction and mode of operation.

Figure 1 is a section of the crown showing the undercut or dovetailed mortise; Figure 2 is a bottom view of the same; Figure 3 is a side view 10 of the root; Figure 4 is a front view of the root showing the screws.

Figure 5 is a modification of the crown, and Figure 6 is a cross section of the same. A represents the undercut or dovetail in the artificial crown, and *b, b*, the pins in the root.

I first fill the nerve cavity in the root with gold or other appropriate 15 filling, and then at the anterior and posterior side of the filling I drill into the solid dentine a hole for the admission of the pins *b, b*, upon which are cut small screw threads, the pins are then firmly secured in the holes. I now fill the undercut with a fusible metal one that will fuse at a low degree of temperature (such as the compound known as 20 Wood's fusible metal), and while yet soft I press the crown firmly over the pins *b, b*. It will be particularly observed that the top of the root is slightly excavated and the bottom of the crown so rounded or shaped as to fit snugly therein. Thus the two parts when joined together as described will form a strong and durable tooth. 25

I am aware that artificial crowns have been provided with round holes for the insertion of single pins, but it is observed that it will be impossible to so firmly secure the crown to the fang as in my method of constructing the mortise, for two reasons; first, because the round holes will not retain the fusible alloy so well; and secondly, because the crown 30 is only secured at the centre instead of both the anterior and posterior portions thereof.

I am also aware that artificial gums have also been constructed with dovetail slots, but the principle involved is totally different from that

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*Mack's Improvement in Artificial Teeth.*

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shown in my Invention, as my object is to use the natural fang in connection with an artificial crown, and so securing the two that a tooth may be inserted as good and as strong as if grown in the mouth without the pain of extracting the root.

- 5 I am also aware that a recess has been formed on the outer surface of the crown, but this differs from my Invention, as the mortise thus constructed will not retain or hold the fusible alloy.

Having thus fully described my Invention, what I claim as new and desire to secure by Letters Patent is,—

- 10 1st. An artificial tooth crown for pivot teeth with an elongated mortise extending toward the labial and back towards the lingual surfaces sufficiently far to receive two pins or screws located in the anterior and posterior portions of the fangs, said mortise or undercut being dovetailed or otherwise shaped to retain firmly its fill of fusible  
15 alloy, substantially as set forth.

- 2nd. An artificial tooth crown provided with an undercut or dovetail mortise in combination with two continuous screw pins, said pins being firmly secured in the solid dentine of the natural fang or root, and the two parts held together by means of a fusible alloy in said undercut,  
20 substantially as herein described.

In testimony that I claim the foregoing, I have hereunto set my hand and seal, this Thirtieth day of December, in the year of our Lord One thousand eight hundred and seventy-one, at Washington, District of Columbia, United States of America.

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CHARLES HENRY MACK. (L.S.)

Witnesses,

THOMSON H. ALEXANDER.

JOHN ALFRED ELLIS.

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A.D.1872. JAN. 17. N<sup>o</sup> 147.  
MACK'S COMPLETE SPECIFICATION.

( 1 SHEET )

FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.

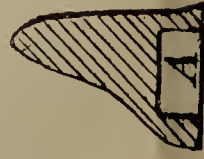
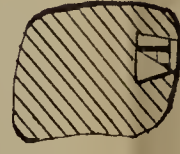


FIG. 6.



*The filed drawing is not colored.*

Drawn on Stone by Malby & Sons.

